

PERFIX™ 200

Automated Optical Shaping (AOS) System



PERFIX™ 200

Make it Perfect. Faster

PerFix™ 200, Orbotech's latest innovation in automated optical Shaping (AOS), perfectly shapes shorts in seconds. With speed much faster than any existing system, PerFix™ 200 enables top quality shaping of most advanced PCB designs, including any-layer, HDI and complex multi-layer boards. Now more than ever, PerFix™ 200 moves the PCB industry closer to achieving zero scrap production.

Benefits

Maximum Scrap Saving

- Perfect shaping of shorts and excess copper defects
- Resolution down to 30µm line and space
- Minimum penetration to the laminate

Superior Quality with CLS Technology™

- Iterative and controlled process
- Automatic comparison to the CAM data

High Speed Automated Shaping

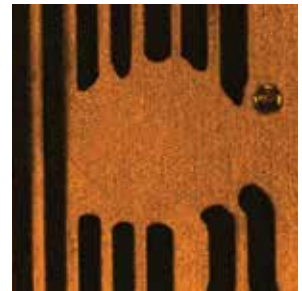
- Up to 3 times faster than existing systems
- Utilizing Orbotech patented laser technologies
- More than 60 shapings per hour of typical HDI defects

Full Openness with Universal Access

- Automatic connectivity to Orbotech's AOI and verification systems
- Shaping center for all excess copper defects
- Quick and easy navigation to any marked defect



Before shaping



After shaping - White light image



After shaping - UV light image





Maximum Scrap Saving

Saving PCBs that otherwise would have to be scrapped, PerFix™ 200 significantly increase PCB production yield on even the most complex any layer, HDI and advanced MLB jobs. Utilizing state-of-the-art technologies, the system shapes any type of short or excess copper defects including those on multiple lines, BGA areas, corners and pads, without damaging the shaped area.

Thoroughly tested to meet the highest industry standards, PerFix™ 200 performs perfect shapings just as if there were never a defect originally. The system's results meet strict manufacturing specifications such as electrical characteristics, durability to time and stress, and visual requirements.

Superior Quality with CLS Technology™

PerFix™ 200's CLS (closed-loop shaping) Technology is the key to outstanding accuracy and speed. Orbotech's proven image acquisition captures precise images of the defect area. A set of specialized image analysis algorithms compares the images to the CAM data in real-time, automatically finds the copper to be removed then guides the system's laser as it accurately ablates excess copper.

The full, 3-step cycle of image acquisition, image analysis and laser ablation is repeated until the shaping is perfect, with no damage to conductors and minimum penetration to the laminate.

High Speed Automatic Shaping

Featuring breakthrough technology advancements, PerFix™ 200 achieves unmatched speed up to 3 times faster than existing systems.

A breakthrough laser system design emits high-frequency pulses coupled with patented, ultra-fast moving mirrors for optimal control. An innovative optical mechanism optimizes the laser intensity and enhance accuracy for superior laser performance on a variety of materials.

Full Openness with Universal Access

With Universal Access, PerFix™ 200 becomes the shaping center for all excess copper defects detected along the PCB production line. In mass production, defects already classified by type and their coordinates are automatically received from Orbotech AOI or verification stations for maximum speed. In Universal Access mode, quick and easy navigation to any marked defect from other AOI systems and electrical testers is possible using a dedicated laser pointer.

